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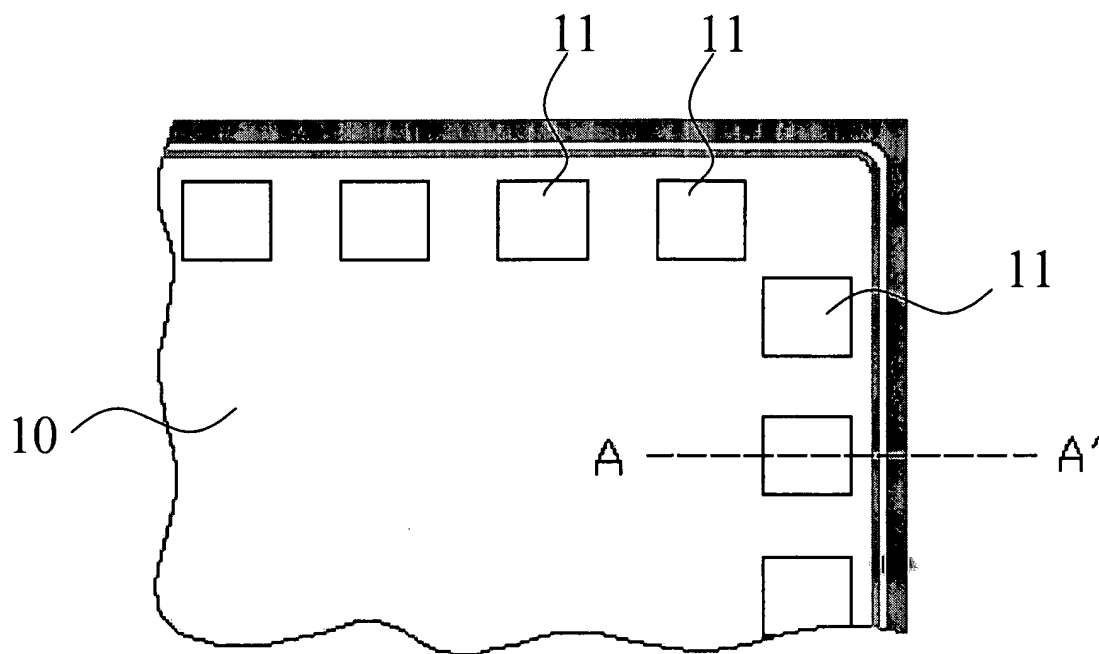


FIG. 1

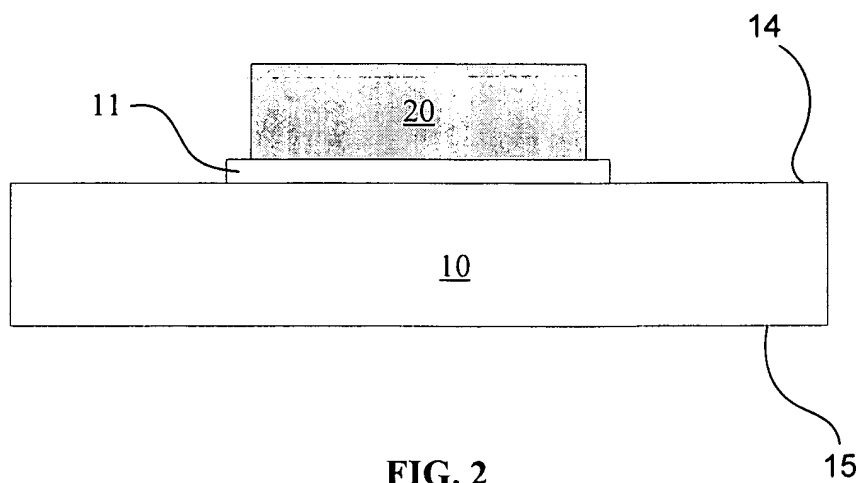


FIG. 2

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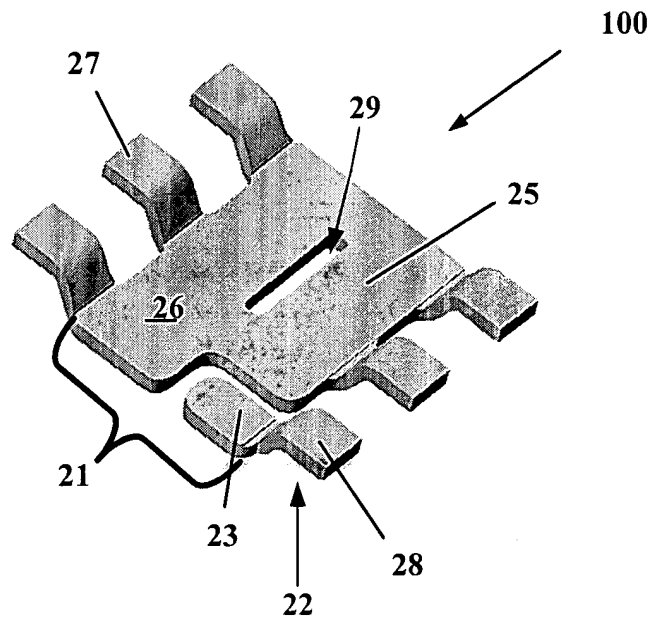


FIG. 3

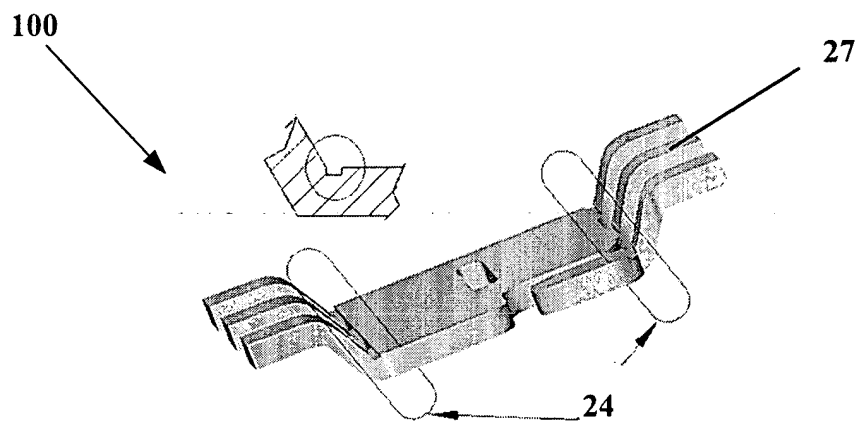


FIG. 4

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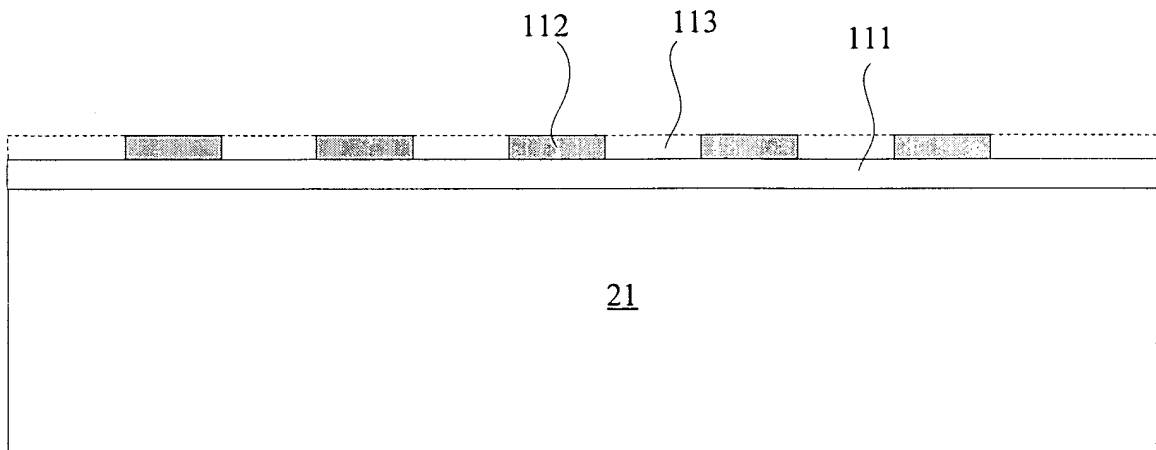


FIG. 5

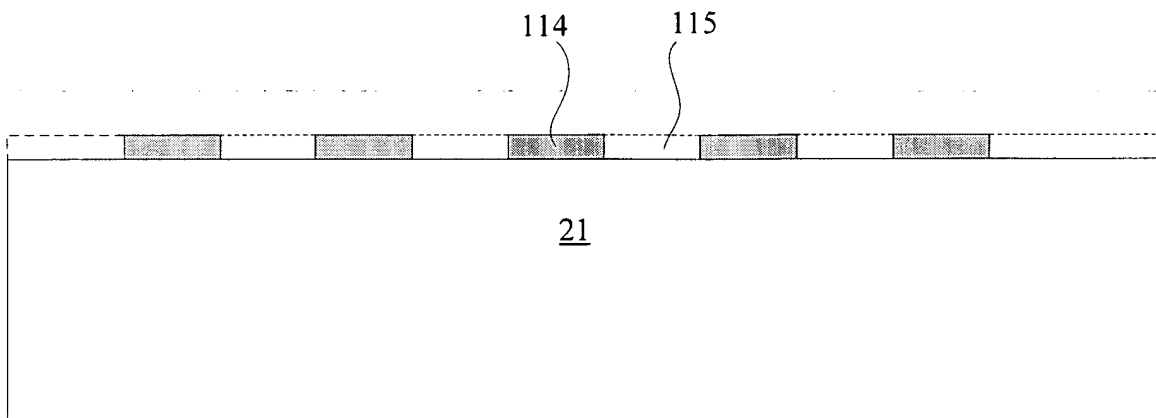
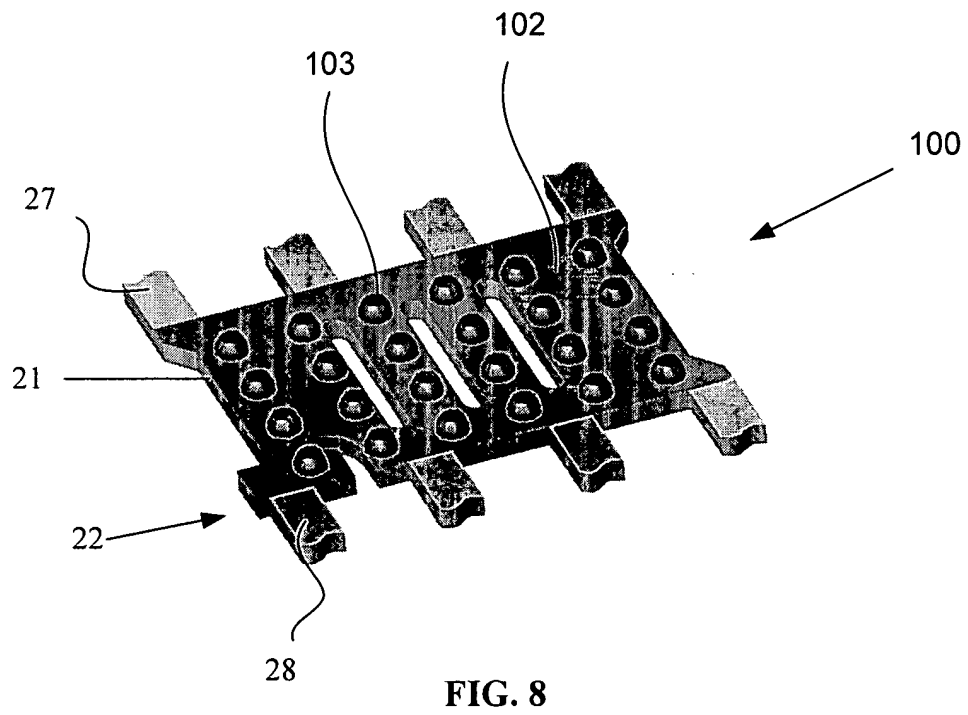
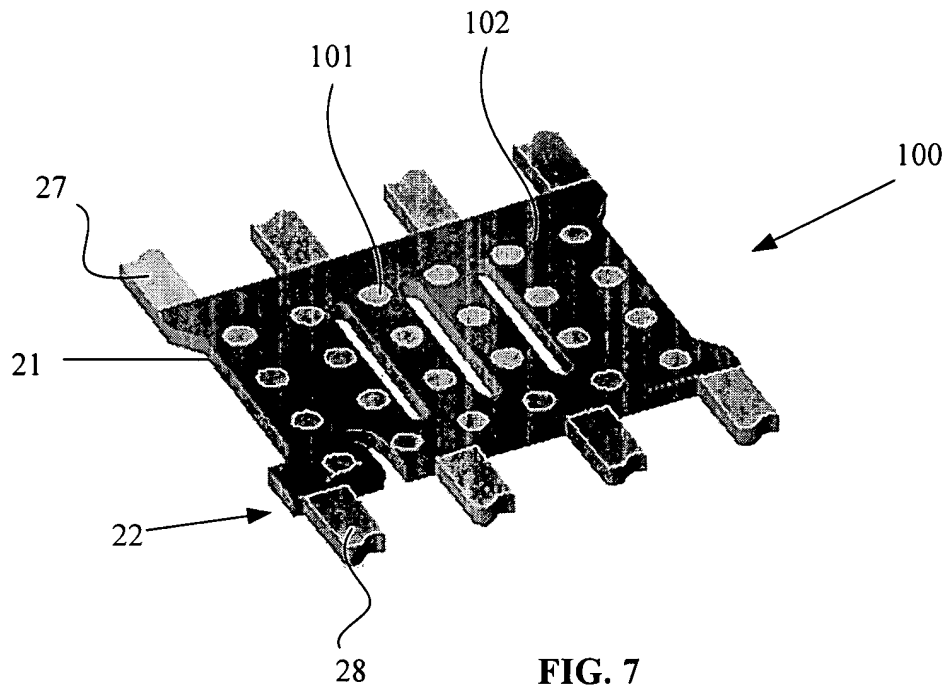


FIG. 6

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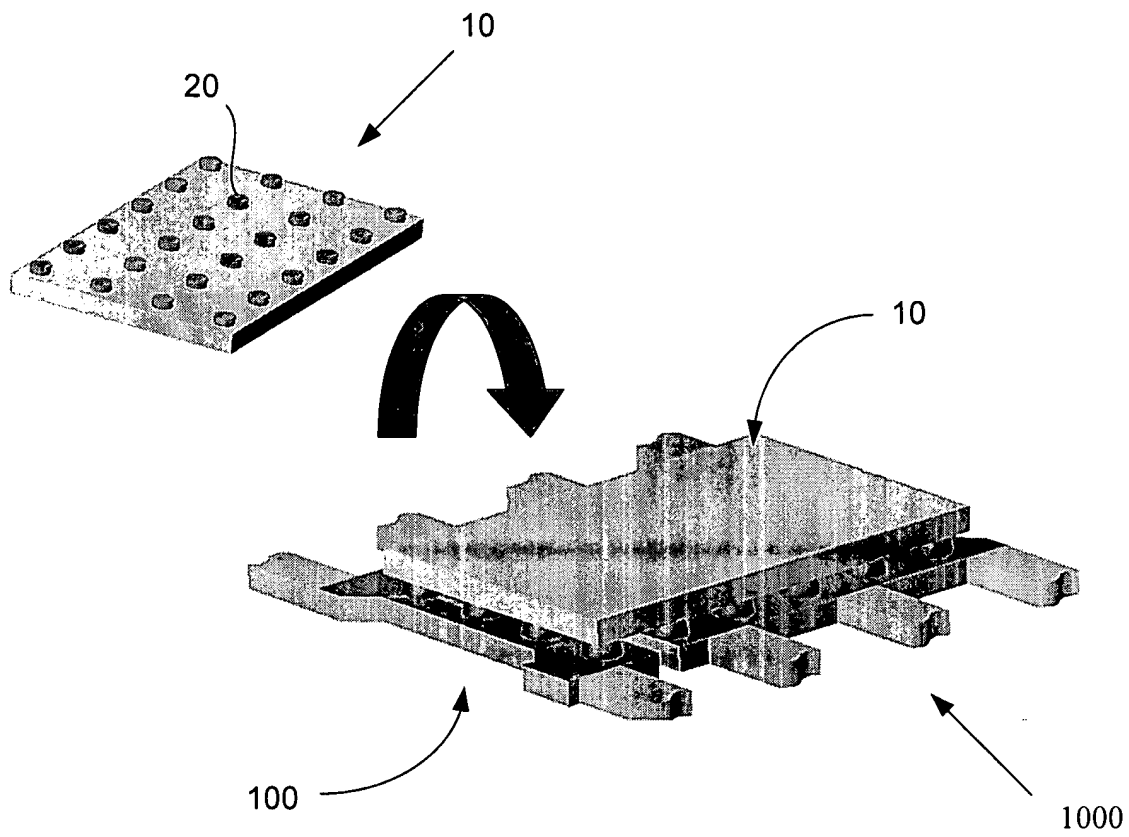


FIG. 9

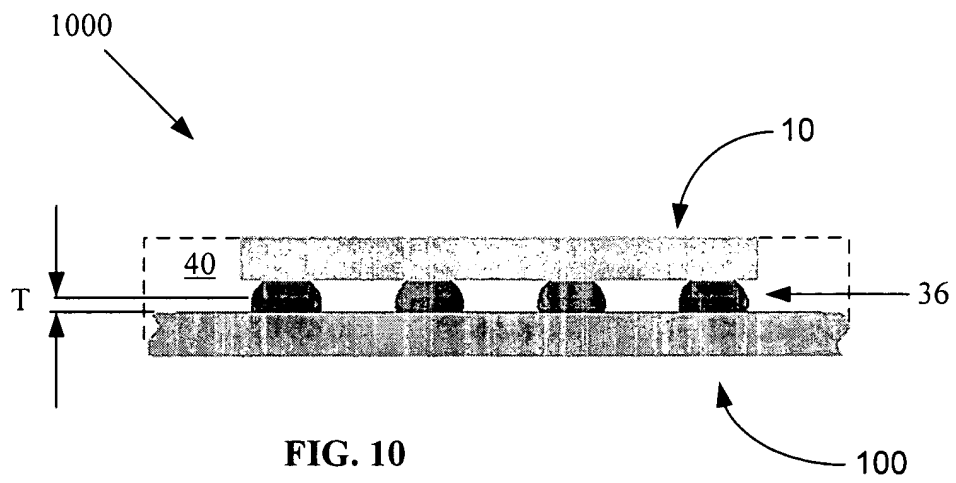


FIG. 10

SELECTIVE PLATING LEADFRAME

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FULLY SOLDERABLE LEADFRAME PAD

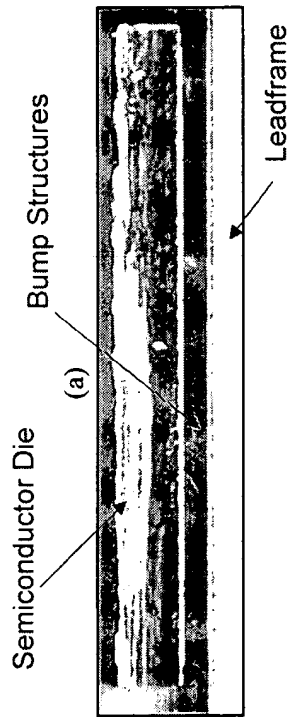


Fig. (a) is a photo of attached die with metal stud in a fully solderable leadframe pad.

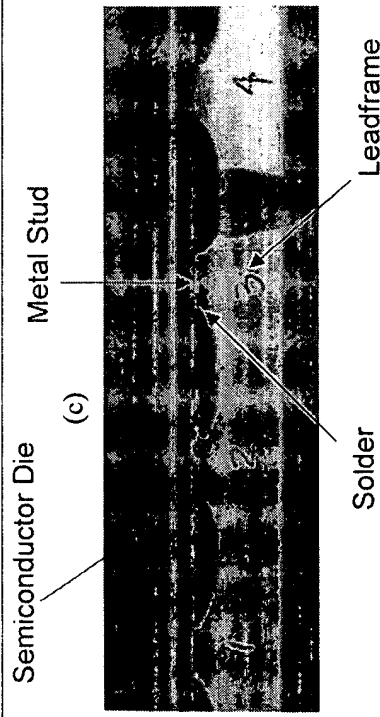


Fig. (c) is a SEM photo of cross-sectioned die with metal stud attached in a fully solderable leadframe pad. The solder spreads widely in the pad and the solder thickness between metal stud and leadframe is thin.

SELECTIVE SOLDERABLE LEADFRAME PAD

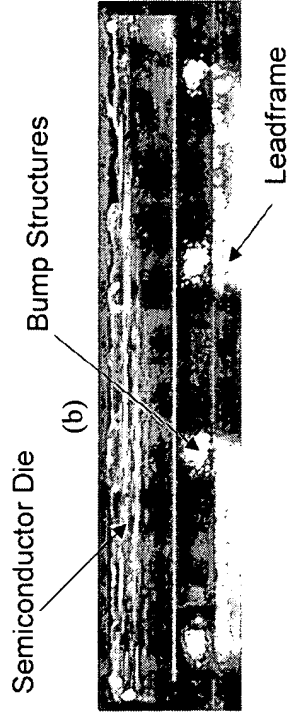


Fig. (b) is a photo of attached die with metal stud in a selective solderable area of leadframe pad.

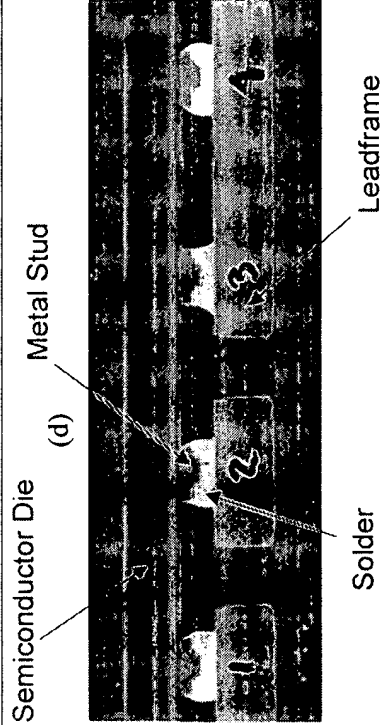
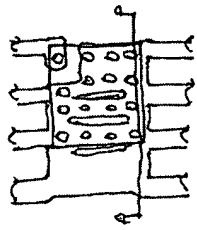
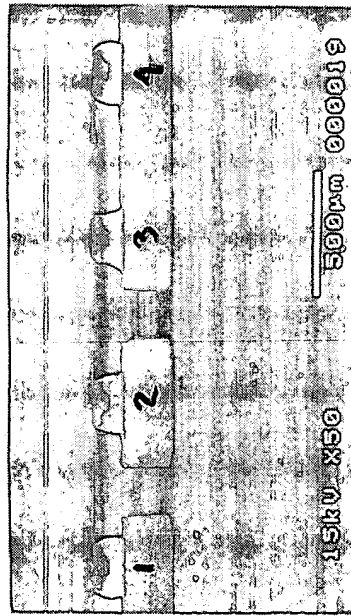


Fig. (d) is a SEM photo of cross-sectioned die with metal stud attached in a selective solderable leadframe pad. The solder is limited to a certain area of the leadframe and the solder thickness between metal stud and leadframe is thick.

FIG. 11

SELECTIVE PLATING LEADFRAME

CROSS-SECTION (SELECTIVE PLATING FRAME)



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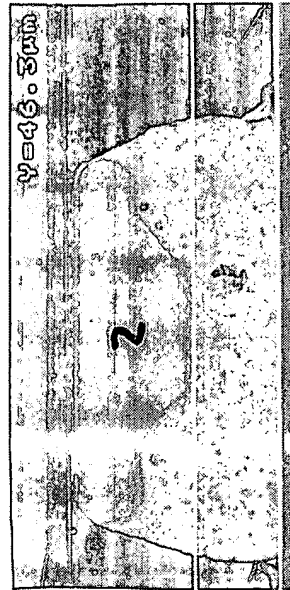


FIG. 12

SELECTIVE PLATING LEADFRAME

CROSS-SECTION (NON - SELECTIVE PLATING FRAME)

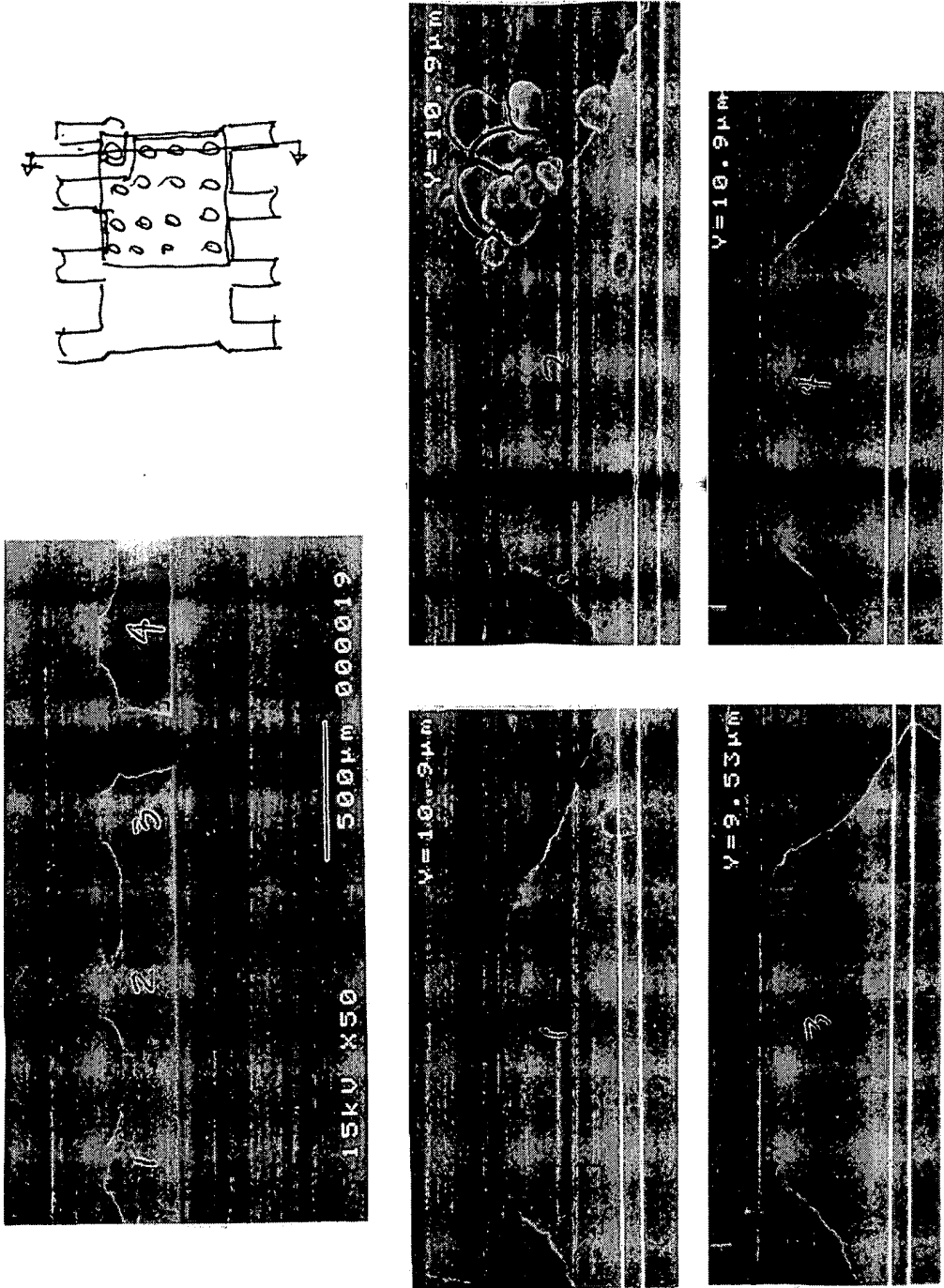


FIG. 13

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